

PATENT APPLICATION

042390.P3612R

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:) August 8, 2001
)
Kurt B. Robinson)
)
Original Patent Number: 5,937,423) Group Art Unit: unknown
)
Issued: August 10, 1999) Examiner: H. Kim

For: REGISTER INTERFACE FOR FLASH EEPROM MEMORY ARRAYS

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I HEREBY CERTIFY THAT THE ENCLOSED PETITION IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE "EXPRESS MAIL" SERVICE UNDER 37 CFR 1.10 ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO: DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE, WASHINGTON, D.C. 20231.

Mark W. Baucher

Name of Person Mailing Paper or Fee

Signature

PRELIMINARY AMENDMENT FOR REISSUE APPLICATION, OFFER TO SURRENDER THE ORIGINAL PATENT, AND ASSENT OF ASSIGNEE TO REISSUE

HONORABLE DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE, Washington, D.C. 20231

SIR:

In accordance with 35 U.S.C. § 251, Applicant is hereby filing a reissue application with claims that are broader than those issued in the original patent.

Please enter the following amendment prior to examination so that there is a total of seven (7) independent and a total of forty-two (42) claims pending in the application.

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AMENDMENT**Amendment to Claims**

Please add the following claims as shown below.

14. (Newly added) An apparatus comprising:

a processor; and

a memory storage device comprising;

a memory array comprising non-volatile memory;

a query memory to store characteristics data of the memory array;

an interface to receive commands from the processor, wherein the commands are adapted based on the characteristics data.

15. (Newly added) The apparatus of claim 14, wherein the processor adapts the commands based on the characteristics data.

16. (Newly added) The apparatus of claim 14, wherein the memory array comprises flash memory.

17. (Newly added) The apparatus of claim 14, where in the query memory is read-only memory.

18. (Newly added) The apparatus of claim 14, wherein the interface comprises at least one register.

19. (Newly added) The apparatus of claim 18, wherein the at least one register is adapted to store at least some of characteristics data.

20. (Newly added) The apparatus of claim 19, wherein the interface comprises at least two registers to store at least some of the characteristics data.

21. (Newly added) The apparatus of claim 14, where in the interface comprises a command register.

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22. (Newly added) An apparatus comprising:
a non-volatile memory array;
a query memory to store data describing attributes of the non-volatile memory array; and
a register interface to provide at least a portion of the data in the query memory and to provide commands to the non-volatile memory array.
23. (Newly added) The apparatus of claim 22, wherein the register interface comprises a command register.
24. (Newly added) The apparatus of claim 22, where in the query memory comprises read-only memory.
25. (Newly added) The apparatus of claim 22, wherein the query memory stores data describing attributes selected from the group consisting of size of the non-volatile memory array, size of blocks within the non-volatile memory array, and erasing data.
26. (Newly added) The apparatus of claim 22, wherein the non-volatile memory array comprises flash memory.
27. (Newly added) The apparatus of claim 22, where in the non-volatile memory comprises electrically-erasable programmable read-only memory (EEPROM).
28. (Newly added) A method comprising:
adapting a command sent to a non-volatile memory array based on attribute data stored in a query memory associated with the non-volatile memory array.
29. (Newly added) The method of claim 28, further comprising reading the contents of the query memory.
30. (Newly added) The method of claim 29, wherein reading the contents of the query memory includes storing characteristic data in an interface.

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31. (Newly added) The method of claim 30, wherein reading the contents of the query memory includes storing characteristic data in at least one register in the interface.

33. (Newly added) The method of claim 30, wherein reading the contents of the query memory includes storing characteristic data in static random access memory.

33. (Newly added) The method of claim 31, wherein reading the contents of the query memory includes transmitting the characteristic data over a system bus to a processor.

34. (Newly added) The method of claim 28, further comprising storing a command in an interface.

35. (Newly added) The method of claim 34, wherein storing a command includes storing a command in a register in the interface.

36. (Newly added) An article comprising: a storage medium having stored thereon instructions, that, when executed by a computing platform, results in: adapting a command sent to a non-volatile memory array based on attribute data stored in a query memory associated with the non-volatile memory array.

37. (Newly added) The article of claim 36, wherein the instructions, when executed, further result in reading the contents of the query memory.

38. (Newly added) The article of claim 37, wherein the instructions, when executed, further result in storing characteristic data in an interface.

39. (Newly added) The article of claim 38, wherein the instructions, when executed, further result in storing characteristic data in at least one register in the interface.

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40. (Newly added) The article of claim 38, wherein the instructions, when executed, further result in transmitting the characteristic data over a system bus to a processor.

41. (Newly added) The article of claim 36, wherein the instructions, when executed, further result in storing a command in an interface.

42. (Newly added) The article of claim 41, wherein the instructions, when executed, further result storing a command in a register in the interface.

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CLEAN VERSION OF CLAIMS FOR SCANNING PER 37 CFR § 1.121

14. An apparatus comprising:

a processor; and

a memory storage device comprising;

a memory array comprising non-volatile memory;

a query memory to store characteristics data of the memory array;

an interface to receive commands from the processor, wherein the commands are adapted based on the characteristics data.

15. The apparatus of claim 14, wherein the processor adapts the commands based on the characteristics data.

16. The apparatus of claim 14, wherein the memory array comprises flash memory.

17. The apparatus of claim 14, where in the query memory is read-only memory.

18. The apparatus of claim 14, wherein the interface comprises at least one register.

19. The apparatus of claim 18, wherein the at least one register is adapted to store at least some of characteristics data.

20. The apparatus of claim 19, wherein the interface comprises at least two registers to store at least some of the characteristics data.

21. The apparatus of claim 14, where in the interface comprises a command register.

22. An apparatus comprising:

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a non-volatile memory array;
a query memory to store data describing attributes of the non-volatile memory array; and
a register interface to provide at least a portion of the data in the query memory and to provide commands to the non-volatile memory array.

23. The apparatus of claim 22, wherein the register interface comprises a command register.

24. The apparatus of claim 22, where in the query memory comprises read-only memory.

25. The apparatus of claim 22, wherein the query memory stores data describing attributes selected from the group consisting of size of the non-volatile memory array, size of blocks within the non-volatile memory array, and erasing data.

26. The apparatus of claim 22, wherein the non-volatile memory array comprises flash memory.

27. The apparatus of claim 22, where in the non-volatile memory comprises electrically-erasable programmable read-only memory (EEPROM).

28. A method comprising:
adapting a command sent to a non-volatile memory array based on attribute data stored in a query memory associated with the non-volatile memory array.

29. The method of claim 28, further comprising reading the contents of the query memory.

30. The method of claim 29, wherein reading the contents of the query memory includes storing characteristic data in an interface.

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31. The method of claim 30, wherein reading the contents of the query memory includes storing characteristic data in at least one register in the interface.

33. The method of claim 30, wherein reading the contents of the query memory includes storing characteristic data in static random access memory.

33. The method of claim 31, wherein reading the contents of the query memory includes transmitting the characteristic data over a system bus to a processor.

34. The method of claim 28, further comprising storing a command in an interface.

35. The method of claim 34, wherein storing a command includes storing a command in a register in the interface.

36. An article comprising: a storage medium having stored thereon instructions, that, when executed by a computing platform, results in: adapting a command sent to a non-volatile memory array based on attribute data stored in a query memory associated with the non-volatile memory array.

37. The article of claim 36, wherein the instructions, when executed, further result in reading the contents of the query memory.

38. The article of claim 37, wherein the instructions, when executed, further result in storing characteristic data in an interface.

39. The article of claim 38, wherein the instructions, when executed, further result in storing characteristic data in at least one register in the interface.

40. The article of claim 38, wherein the instructions, when executed, further result in transmitting the characteristic data over a system bus to a processor.

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41. The article of claim 36, wherein the instructions, when executed, further result in storing a command in an interface.

42. The article of claim 41, wherein the instructions, when executed, further result storing a command in a register in the interface.

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Remarks

Applicant hereby requests that United States Patent and Trademark Office initiate broadening reissue proceedings for the above-mentioned issued patent. Applicant requests that the preceding claims be added prior to examination.

Specification

A copy of the original patent is filed concurrently with this application. The copy of the original patent was prepared by photocopying the original patent as it was issued by the Patent Office.

Oath and Declaration

Applicant has filed concurrently with this reissue application an oath and declaration that is believed to meet the requirements of 37 CFR §1.175.

Offer to Surrender the Original Patent

Patent No. 5,937,423 granted to Kurt B. Robinson on August 10, 1999 of which Intel Corporation, now sole owner by assignment, and on whose behalf and with whose assent the accompanying application is made, hereby offers to surrender said letter patent.

Assent of Assignee to Reissue

The undersigned assignee hereby avers in accordance with 37 CFR §3.73 that he is authorized to act on behalf of the assignees of the entire interest in the above-mentioned letters patent and hereby assents to the accompanying application.

Drawings for the Reissue Application

Applicant has included a copy of the drawings from the original patent as it was issued by the Patent Office.

Request for Abstract of Title Report

Applicant is filing herewith a request for a certified Abstract of Title report and appropriate fee in accordance with 37 CFR §1.171.

Support for Amendments.

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As indicated above, claims 14-42 have been added. Support for the amendments is at least shown by the examples in FIG. 2-4 and described in Applicant's specification. Support for the amendments can also be found in claims 1-13 of the original patent.

Applicant respectfully submits that no new matter has been added.

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Conclusion

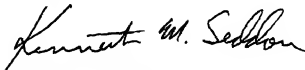
Applicant respectfully requests that the Examiner allow all pending claims.

Should it be determined that an additional fee is due under 37 CFR §§1.16 or 1.17, or any excess fee has been received, please charge that fee or credit the amount of overcharge to deposit account #02-2666.

If the Examiner believes that there are any informalities which can be corrected by an Examiner's amendment, a telephone call to the undersigned at (480) 554-9732 is respectfully solicited.

Respectfully submitted,

Kurt B. Robinson



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